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Novel essential amino acid-sulfanilamide hybrid as safe anti-ulcerogenic agent with anti-helicobacter pylori activity (Article) (Open Access)

Awaad, A.S.[a], Alafeefy, A.M.[b], Alasmary, F.A.S.[c], El-Meligy, R.M.[d], Zain, M.E.[e], Alqasoumi, S.I.[f]

[a]Pharmacognosy Department, College of Pharmacy, Sattam Bin Abdulaziz University, Al-Kharj, Saudi Arabia
[b]Department of Chemistry, Kulliyyah of Science, International Islamic University, Malaysia
[c]Chemistry Department, College of Science, King Saud University, Riyadh, Saudi Arabia

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Abstract

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A novel and safe essential amino acid (Leucine) incorporating sulfanilamide was synthesized, and evaluated for its anti-ulcerogenic activity and in vitro anti-Helicobacter pylori activity. The new molecule showed a dose dependent activity against absolute ethanol-induced ulcer in rats, it produced percent protection of control ulcer by 66.7 at dose 100 mg/kg. In addition it showed a potent anti-Helicobacter pylori activity in vitro against 7 clinically isolated strains. The minimum inhibitory concentration (MIC) ranged from 12.5 to 50 μg/ml. The preliminary safety studies and toxicity profile are optimistic and encouraging. © 2017

Reaxys Database Information

View Compounds

Author keywords

Amino acid Anti-Helicobacter pylori Anti-ulcerogenic agent In-vitro Natural products hybrid Sulfanilamide

Indexed keywords

EMTREE drug terms: 4 methyl 2 [2 oxo 2 (4 sulfamoylphenylamino)ethylamino]pentanoic acid alanine aminotransferase amoxicillin antiulcer agent aspartate aminotransferase creatinine erythromycin leucine ranitidine sulfanilamide derivative unclassified drug

EMTREE medical terms: alanine aminotransferase blood level antibacterial activity antihelicobacter pylori activity antiulcer activity antiulcerogenic activity Article aspartate aminotransferase blood level carbon nuclear magnetic resonance clinical article column chromatography controlled study creatinine blood level drug potency drug safety drug synthesis female gastritis human human tissue in vitro study kidney function LD50 liver function male minimum inhibitory concentration mouse nonhuman peptic ulcer proton nuclear magnetic resonance rat stomach biopsy ulceration index urea blood level

Chemicals and CAS Registry Numbers:

alanine aminotransferase, 9000-86-6, 9014-30-6; amoxicillin, 26787-78-0, 34642-77-8, 61336-70-7; aspartate aminotransferase, 9000-97-9; creatinine, 19230-81-0, 60-27-5; erythromycin, 114-07-8, 70536-18-4; leucine, 61-90-5, 7005-03-0; ranitidine, 66357-35-5, 66357-59-3

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Awaad, A.S.; Pharmacognosy Department, College of Pharmacy, Prince Sattam Bin Abdulaziz University, Al-Kharj, P.O. Box 173, Riyadh, Saudi Arabia; email:amaniawaad@hotmail.com

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